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VS

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/240,619 02/01/99 CONRAD

W 5562-740/PMD

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IM22/1126

EXAMINER
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ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 11/26/99

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AIR MAIL

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
09/240,619

Applicant(s)  
Wayne Ernest Conrad et al.

Examiner  
Frank Lawrence

Group Art Unit  
1724



☒ Responsive to communication(s) filed on Feb 1, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1035 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

☒ Claim(s) 1-25 is/are pending in the application.

Of the above, claim(s) 13-25 is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-12 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☒ Claims 1-25 are subject to restriction or election requirement.

## Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on Feb 1, 1999 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## **DETAILED ACTION**

### ***Election/Restriction***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-12, drawn to a domestic method of treating a liquid comprising water, classified in class 210, subclass 760.
  - II. Claims 13-25, drawn to a domestic apparatus for treating a liquid comprising water, classified in class 210, subclass 205.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process, such as purifying other liquids like oil or organic coolants.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Mr. Philip Mendes da Costa on November 17, 1999 a provisional election was made without traverse to prosecute the invention of Group I,

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claims 1-12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-25 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

#### ***Priority***

6. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Canada on November 9, 1998. It is noted, however, that applicant has not filed a certified copy of the foreign application as required by 35 U.S.C. 119(b).

#### ***Drawings***

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 42. Correction is required.

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*Specification*

8. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The term "comprise" should be avoided.

*Claim Rejections - 35 USC § 112*

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claims 10 and 11 recite the limitation "the off gas" in line 2 of each claim. There is insufficient antecedent basis for this limitation in the claims.

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*Claim Rejections - 35 USC § 103*

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-3, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. ('368; abstract; figure 1; col. 1, lines 28-42; col. 9, lines 12-62).

Nelson et al. ('368) disclose a system for producing high purity water comprising providing water in a pressurized treatment vessel, bubbling ozone into the vessel, creating pressure in the vessel with the bubbled ozone, using the created pressure to dispense water from the vessel, and detecting the pressure in the vessel and venting the gas within if the pressure exceeds a maximum value. The instant claims differ from the disclosure of Nelson et al. ('368) in that the method is "domestic." Since the produced water is of ultrapure quality, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system of Nelson et al. to use it in a domestic setting because of its simplicity and ability to entrain a high level of ozone in the water.

14. Claims 4, 8, 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. ('368) in view of Olsen ('576; abstract; col. 2, lines 14-30; col. 4, line 66 to col. 5, line 7; col. 5, line 63 to col. 6 line 9; col. 7, lines 4-23; col. 8, lines 54-60).

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Nelson et al. ('368) disclose all of the limitations of the claims except that there is a post filter downstream of the treatment vessel, the liquid is treated to meet a prespecified condition, that the user is signaled and dispensing is prevented if treatment is incomplete. Olsen ('576) discloses a domestic system comprising using a treatment vessel to bubble ozone into water, venting ozone gas from the vessel, using a postfilter downstream from the vessel, detecting the level of ozone treatment based on treatment time and signaling the user or preventing operation of the system. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system of Nelson et al. to include filtering the treated water in order to provide additional treatment to remove particles entrained in the water that can not be removed by gas treatment, providing a higher purity. It would have also been obvious to ensure that a desired level of treatment is obtained before the water can be dispensed to a user for consumption by using predetermined parameters and warning signals in order to provide steps that prevent harmful contaminant containing water that has not been completely purified from being ingested, thus rendering the treatment system useless.

15. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. ('368) in view of Olsen ('576) as applied to claim 4 in paragraph 14 above, and further in view of Capehart ('584; abstract; col. 10, lines 24-29; col. 13, lines 59-67).

Nelson et al. ('368) in view of Olsen ('576) disclose all of the limitations of the claim except that off gas vented from the treatment vessel is directed through a downstream filter. Capehart ('584) discloses a method for producing potable water by contacting it with ozone in a

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treatment vessel, venting off gas from the vessel, and directing vented off gas from the vessel to a downstream filter. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the method of the instant specification to include directing off gas through a downstream filter in order to provide a way to prolong the life of the filter by destroying microorganisms which may build up inside the filter by applying the off gas, which will still contain ozone which has not decomposed to oxygen.

16. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. ('368) in view of Olsen ('576) as applied to claim 8 in paragraph 14 above, and further in view of Pearson ('574; abstract; col. 5, lines 37-43; col. 10, lines 17-25).

Nelson et al. ('368) in view of Olsen ('576) disclose all of the limitations of the claims as discussed in paragraph 14 above except that ozone concentration is measured in the off gas and the user is signaled if the concentration is higher or lower than a predetermined amount. Pearson ('574) discloses a method for disinfecting water comprising adding ozone to the water in a treatment vessel, filtering the water downstream, detecting ozone concentration in vented off gas, sounding an alarm if the concentration exceeds a predetermined level at one stage, and sending electric signals to increase ozonation if the concentration in the off gas is below an excess level. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the method of the instant specification to include detecting ozone concentration in vented off gas in order to ensure that ozone levels in the treatment system are kept sufficiently high to



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fully oxidize contaminants in the water, and also to prevent the escape of harmful levels of ozone into the atmosphere and to optimize ozone production so that none is wasted.

### *Conclusion*

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The reference to Hurst ('140; col. 9, lines 40-53) discloses a process for purifying water by applying ozone and detecting ozone concentration in vent gas to control treatment levels in the system.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank M. Lawrence whose telephone number is (703) 305-0585. The examiner can normally be reached on Monday through Thursday from 8:00 AM to 4:30 PM, and on alternate Fridays from 8:00 AM to 3:30 PM.

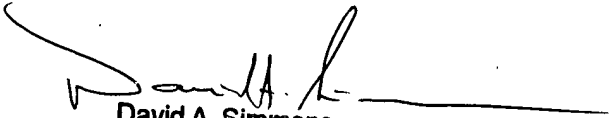
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. David A. Simmons, can be reached on (703) 308-1972. The fax number for official after final faxes for this Group is (703) 305-3599, for all other official faxes the number is (703) 305-7718, and for unofficial faxes the number is (703) 305-3602.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.

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David A. Simmons  
Supervisory Patent Examiner  
Technology Center 1700

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November 19, 1999